CRITERION 2. PROGRAM EDUCATIONAL OBJECTIVES

Educational objectives for the Information Science program have been developed in conjunction with our constituencies and are consistent with the mission statements of parent units. This section contains the mission statements of the Kuwait University and College of Computing Sciences and Engineering (CCSE), and elaborates the process by which these objectives are determined, how the program ensures these objectives are achieved, and the systematic assessment to assure continuous improvement of the program.

A. Mission Statement

Provide the institutional mission statement.

As mentioned early, since 2002 Information Science (IS) department was established as one of the department of College for Women. Since its inception in 2002, the academic program of Information Science Degree was outcome based. With reference to Amiri Decree No. (130) in year 20011, the College of Computing Sciences and Engineering (CCSE) was established and Information Science department joined CSSE as one of the department. The department formulated Vision and Mission statements that are consistent with the core principles and values stated in those of Kuwait University. The vision and mission statement are published in Information Science Department brochure and the department website (http://www.isc.ku.edu.kw/).

A.1. The Kuwait University Mission Statement

The mission of Kuwait University is to prepare a prominent human capital characterized by their exceptional knowledge to meet the development requirements, to keep pace with the latest information and technology in higher education, and to lead in scientific research while upgrading in serving the community. The Kuwait University Mission is published in website (http://kuweb.ku.edu.kw/ku/AboutUniversity/StrategicPlan/Mission/index.htm)

The mission of Kuwait University translates to:

U1. Strengthening national, Arabic, and Islamic values and principles
U2. Disseminating knowledge
U3. Developing and investing in human resources
U4. Achieving excellence and distinction in education, scientific research, and community services
U5. Utilizing modern technology

A.2. The College (CCSE) Mission Statement

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The mission of the college is to graduate competent professionals in computing sciences and engineering by offering innovative outcome-based academic programs. The college programs are conducted by renowned faculty and using state-of-the-art facilities in a student-centered learning environment that enables our graduates to assume positions of responsible leadership in the public and the private sectors. The college is committed to contribute to the welfare of the society in the State of Kuwait by educating, disseminating, and enriching knowledge to the students. The CCSE mission is published in website (http://ccse.ku.edu.kw/?com=category&act=view&id=68).

The mission of the College of Computing Sciences and Engineering translates to:

C1. Graduating competent professionals in computing sciences and engineering.
C2. Offering innovative outcome-based academic programs.
C3. Conducting programs by renowned faculty and using state-of-the-art facilities in a student-centered learning environment.
C4. Enabling the graduates to assume positions of responsible leadership in the public and the private sectors.
C5. Committing to generate, disseminate, and enrich knowledge through research.
C6. Contributing to the welfare of the society in the State of Kuwait.

A.3. The Department (ISC) Mission Statement

The mission of the Department of Information Science is to graduate highly-educated, well-rounded and career-oriented professionals in Information Systems. Our outcome-based curriculum equips students with knowledge and skills enabling them to transform real world data into knowledge using latest concepts in information and communication technologies to develop applications that support decision making and serve the public and private organizations in the State of Kuwait. The IS department mission is published in website (http://www.isc.ku.edu.kw/?page_id=16).

B. Program Educational Objectives (PEOs)

List the program educational objectives and state where these can be found by the general public.

Starting from fall 2003 the IS department offering courses with well-defined program educational objectives (PEOs). The program educational objectives are designed in accordance with student outcomes.

With reference to IS Department Advisory Board (DAB) meeting # 1, for year 2015-2016 held on 6th March, 2016 at 12:30-02:30 PM. In this DAB meeting, the PEO’s were translated in to:

I. Engage in productive careers with the knowledge of computing to develop, deliver, and manage information systems that support public and private organizations.
II. Excel in their work environment by communicating effectively, functioning effectively as a team, and practicing professional ethics with the sense of social responsibility.

III. Adapt to the challenges of the changing environment and the new technologies, and to continue professional development, broaden their professional knowledge and/or pursue graduate studies.

Our Program Educational Objectives (PEOs) are designed to prepare graduates to achieve career and professional accomplishments in the field of Information Systems. Our PEOs are consistent with the mission of the university and college.

The program objectives are published in:
- The Department of Information Science web page
  (http://www.isc.ku.edu.kw/mission.php?panel=0#Accordion1#tphp)
- The Department of Information Science handbook
- Employer Survey

C. Consistency of the Program Educational Objectives with the Mission of the Institution

Describe how the program educational objectives are consistent with the mission of the institution.

Kuwait University has a broad based mission as suggested in its mission statement above. Kuwait University is the only government (state) university in Kuwait which makes it responsible for a wide spectrum of programs in art, social sciences, humanities, business, education, engineering, sciences, business administration, religion, medicine and law. The university puts a particular emphasis on programs that prepare graduates to work in different public and private organizations in the State of Kuwait. Accordingly, Kuwait University plays a preeminent role in graduating professionals to fit and adapt to the work environment in the State of Kuwait. Our department’s mission is consistent with the institution’s mission (See table 2.1 and 2.2) and is focused on graduating highly-educated information systems professionals who would be able to use their information systems knowledge to support decision making and be productive when joining the work force in Kuwait. Our mission therefore focuses on developing national human resources. The mission is realized through the three educational objectives listed above.
Table 2.1: Relation of the Program Educational Objectives to University Mission Statements

<table>
<thead>
<tr>
<th>Mission Statement Component</th>
<th>I</th>
<th>II</th>
<th>III</th>
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<tbody>
<tr>
<td><strong>Kuwait University Mission</strong></td>
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<td>U1</td>
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<td>U2</td>
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<td>U5</td>
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Table 2.2: Relation of the Program Educational Objectives to College Mission Statements

<table>
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<tr>
<th>Mission Statement Component</th>
<th>I</th>
<th>II</th>
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<tr>
<td><strong>College of CCSE Mission</strong></td>
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<td>C1</td>
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<td>C6</td>
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D. Program Constituencies

List the program constituencies. Describe how the program educational objectives meet the needs of these constituencies.

We identify the following stakeholders to be the constituencies with respect to program educational objectives and student outcomes. The program stakeholders are shown in figure 2.1.

Figure 2.1: IS Program constituencies

Here we state the role and aims of each constituency:

1) **Students of IS program:** Our students are expected to become technically competent, professionally and socially responsible individuals in their workplace. Our students are interested in learning and acquiring fundamentals as well as analytical skills in the field of Information Systems (Objective I). They are motivated to be professionals in order to serve their community (Objective II) and advance in their careers (Objective III). Clearly, our objectives are of great interest to our students as it will prepare them for career opportunities in Information Systems in Kuwait.

Our students provide constant feedback to the department by means of student evaluation, exit survey, and portfolios reflections. Student evaluations are performed every semester, which has rubrics scores as well as written comments and suggestions. Results of student evaluations are utilized by faculty to acknowledge students concerns and take actions for course improvements.

We have open departmental meetings with the students once per year. The department Chairman and the faculty members in the department attend the meeting. The Dean and the Vice Deans are also invited. Students ask questions and raise concerns about the program. Examples of problems that have been raised and addressed include extension of laboratory hours, workload in some courses, and the need for classes that cover
increasingly important topics such as their preference in the choice of the environment electives. This meeting also allows the chair to inform students of new initiatives and changes and acknowledge students’ concerns and comments. This ensures that students are up-to-date on general departmental plans and that they have the ability to freely communicate with the faculty members and express their concerns.

In addition, the Department General Advisor together with the Academic Advisors arrange general student advising meetings once per semester. Students address any problem and any difficulty that they are facing regarding registration and their study plans. If the students raise any major problem, the general advisor normally gives a verbal and written report to the department Chairman. The department Chairman consults with the Vice Deans and the department Curriculum Committee for possible practical solution.

Assessment of students helped us in improving our outcomes and objectives. They play a vital role in the ongoing assessment of our Continuous Improvement Process and the assessment of department outcomes and objectives. They provide feedback for program improvement through exit surveys, their reflections and outcome achievements in student portfolios, and course data. The results are used in the Continuous Improvement Process for program improvement.

2) **Alumni**: Alumni is one of the major stakeholders to determine the program educational objectives. They dictate a well-structured set of program educational objectives as their career and reputation is associated with the quality of program educational objectives. Alumni provide their feedback on our outcomes/objectives every two years using Alumni Survey. They recommend revision in the PEOs based on experiences which they have faced in the workplace. They identify the areas of improvement in our program. Alumni feedback through surveys is used in the Continuous Improvement process for Program/Curricular improvement or revision of objectives. In general, the college and the department consider Alumni feedback very seriously since they are the backbone of the institution.

Since the alumni is an integral part of the program, the department convenes an alumni get-together every year in the campus. Usually this meeting is not formal. This meeting provides good opportunity for alumni to share their views to improve the quality of the program. For recent meetings, please see the folder “Criterion 2 – Program Educational Objectives”. A list of “ISC graduates distributed according to employers is available in the folder “Criterion 2 – Program Educational Objectives”.

3) **Faculty**: The faculty is the livewire of the program. They fulfill their teaching responsibility in leading the students in the learning process, and by periodically evaluating, and adjusting if necessary, the educational outcomes relative to the educational objectives. Faculty members ensure that students attain the necessary skills and acquire the sufficient knowledge of Information Systems. They make sure that the graduates advance in their careers in different, well known and competent organizations in Kuwait. It is of their interest to see our graduates competing with graduates from other well-established programs inside and outside Kuwait. Faculty members provide feedback to ensure that courses are aligned with the program educational objectives. The department conducts a faculty survey (ICEF) every semester to evaluate how the department meets its student outcomes and thus its PEOs.
4) **Employers**: No one needs to emphasize the role of employers in any university program. The employers naturally hire graduates who are technically competent, productive, self-motivated learners, team members and have excellent communication and leadership skills. Kuwait employers are always keen in hiring our graduates. They also show interest in adjusting our program educational objectives to suit their work professionalism and needs. They require our graduates to gain the ability to adapt to new technologies, and to self-learn new skills and techniques. Every two years, the department performs employer survey to ensure that our objectives are aligned with their expectations.

5) **Department Advisory Board** (DAB). Department Advisory Board is a group of representatives from private and public sectors. They are potential employers of our graduates. The Chairman of the DAB is the Department of Information Science Chairman. Members of the DAB help the department in refining PEOs and updating our curriculum. The Department Advisory Board meets once per year. The Program Educational Objectives are sent to all Advisory Board members by email for review. In the DAB meeting, the department mission, Program Educational Objectives, and Student Outcomes are presented by the DAB chairman. All three items are explained and discussed. The DAB provides its feedback and comments during the meeting and some members send their comments by email. The minutes of the meeting, comments and feedback of the advisory board are available in the display room.

The Assessment and Continuous Improvement Committee solicits any comments on Program Educational Objectives from various constituencies, discusses them and seeks approval of any changes through the Department Council.

**D.1 Alignment of the PEOs with the Needs of Program Contingencies**
The first educational objective of the program is to empower the graduates with knowledge and skills necessary to have a successful career in information systems using modern technologies and IS management skills. The second objective is to enable graduate to be professionally excel in their work environment by effective communication, team work quality and contribute to developing professional and ethical integrity, and leadership. The third objective aims to engage our student in life-long learning and make them continuously seek professional development. The program objectives thus serve the employers in the computing industry, academic and educational institutions in the state of Kuwait and the region.

The department interacts with the constituencies by means of general/formal meeting surveys, and interviews. For example, the Department Advisory Board meeting for year 2015-2016 was held on March 6th, 2016 and graduate and student meeting with faculty members was held on Mach 2, 2016. This was done in order to get the alumni feedback regarding the PEOs. The objective of the interaction was to let the constituencies participate in the process of reviewing our educational objectives and student outcomes. For recent meetings, please see the folder “Criterion 2 – Program Educational Objectives”.
E. Process for Review of the Program Educational Objectives

Describe the process that periodically reviews the program educational objectives including how the program’s various constituencies are involved in this process. Describe how this process is systematically utilized to ensure that the program’s educational objectives remain consistent with the institutional mission, the program constituents’ needs and these criteria.

Program educational objectives can only be revised occasionally. The PEOs are normally revised if the mission statement of Kuwait University is revised or college mission statement is revised or there is a suggestion from the stakeholders to revise PROs. The PEO’s mapping was revised two times recently when:

1. Kuwait University changes his mission statement.
2. IS department joined newly formed college of Computing Sciences and Engineering.

The assessment & continuous improvement committee assesses the feedback and suggestions of program stakeholders and submits an assessment report to the department at the beginning of every academic year. The department chairman subsequently follows up the issue with the relevant committees, department council and college council. If there is any revision in the PEOs, then it will be properly informed to all stakeholders and published in the department website.

Several measurement tools accomplish periodic evaluation of the PEOs in order to meet the needs of the constituencies. They are listed in Table 2.3.

<table>
<thead>
<tr>
<th>Assessment Tool</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>1 Employer Survey</td>
<td>every 2 years</td>
</tr>
<tr>
<td>2 Alumni Survey</td>
<td>every 2 Years</td>
</tr>
<tr>
<td>3 Department Advisory Board meeting</td>
<td>Once in a year</td>
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The assessment tools are described below:

1. **Employer surveys** are performed every two years. This is the primary assessment tool for our program educational objectives. It is designed to see how well the program meets our program educational objectives and to find out how our students compete with students from other universities. The survey is done by email and/or site visits to employers. The employer survey is directly focused on educational objectives to assess the extent in which our graduates meet the employer expectations and the level that our graduates satisfy the job requirements. Copies of survey tools are available in the folder “Criterion 2 – Program Educational Objectives”.

2. **Alumni surveys** are performed every second year in the spring semester. This survey is done by email. Our alumni assess the extent in which the SOs are
achieved with our educational objectives. This alumni survey is an indirect tool ideally used for assessing soft objectives such as continuing professional development, readiness for joining the workforce, and nourishing social responsibilities. Copies of survey tools are available in the folder “Criterion 2 – Program Educational Objectives”.

(3) **Department Advisory Board Meetings** are conducted once a year. The majority of our advisory board members are IT managers from different government and private sectors in Kuwait. The members represent a wide range of age groups, experience, fields and domains. We have included the director of IT center of the Civil Service Centre as a member. The Civil Service Centre in Kuwait is a central government organization through which all government employment services are processed.

<table>
<thead>
<tr>
<th>Objective</th>
<th>Measurement Mechanism</th>
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<tbody>
<tr>
<td>I. Engage in productive careers with the knowledge of computing to develop, deliver, and manage information systems that support public and private organizations.</td>
<td>✓ ✓ ✓</td>
</tr>
<tr>
<td>II. Excel in their work environment by communicating effectively, functioning effectively as a team, and practicing professional ethics with the sense of social responsibility.</td>
<td>✓ ✓ ✓</td>
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<td>III. Adapt to the challenges of the changing environment and the new technologies, and to continue professional development, broaden their professional knowledge and/or pursue graduate studies.</td>
<td>✓ ✓ ✓</td>
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E.1 Process of Revising Program Educational Objectives (PEOs):

The process of reviewing Program Educational Objectives is illustrated in Figure 2.2.

A. Collect feedback:
The achievement and feedback regarding PEOs are biyearly collected from the following stakeholders:
1. Department Advisory Board (DAB)
2. Employer
3. Alumni

B. Analyze feedback
The DAB feedback is collected and summarized biyearly. In addition, the graduates attainment of PEOs is analyzed biyearly based on data collected using
1. Employer Survey
2. Alumni Survey

C. Make Recommendation
Analyzing the feedbacks of DAB, Employer and Alumni, the ABET committee prepares and submits a biyearly recommendation to the department chairman for further action.

D. Take Action
1. Refine PEOs
2. Revise mapping between PEOs and SOs
3. Revise curriculum

Figure 2.2 Program educational objective assessment cycle.

The steps in Figure 2.2 are written down below for better clarity:
A. Collect feedback:
The survey is conducted biyearly from the following stakeholders:
   1. Department Advisory Board (DAB)
   2. Employer
   3. Alumni

B. Analyze feedback
The achievement of PEO is assessed biyearly by
   1. DAB feedback
   2. Employer Survey
   3. Alumni Survey

C. Make Recommendation
Analyzing the feedbacks of DAB, Employer and Alumni, the ABET committee prepares and submits a recommendation to the department chairman for further action.
D. Take Action
   1. Refine PEOs and the mapping between PEOs and SOs
   2. Implement the feedback by refining curriculum

The Step D.1, which is “Refine PEOs and the mapping between PEOs and SOs”, is illustrated diagrammatically in Figure 2.3.

Figure 2.3 Process to refine Program educational objectives.